

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/045903

C38

A. CLASSIFICATION OF SUBJECT MATTER

INV. C07D405/14 C07D213/75 C07D405/12 C07D413/12 C07D471/04
C07D471/14 C07D471/20 C07D498/04 A61K31/44 A61P31/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/27103 A (SMITHKLINE BEECHAM CORP [GB]; MILLER WILLIAM H [US]; NEWLANDER KENNETH) 19 April 2001 (2001-04-19) abstract; claims 1-5,7,10,11,13-16; examples 1,4,7,8,10,12-20,22,... -----	1-4, 18-47
X	WO 03/088897 A (AFFINIUM PHARM INC [CA]; BURGESS WALTER J [US]; JAKAS DALIA [US]; HUFF) 30 October 2003 (2003-10-30) claims 1,2,5-10; examples 7-10,18,29-40,54,... -----	1-4, 18-47
X	WO 2004/052890 A (AFFINIUM PHARM INC [CA]; BERMAN JUDD [CA]; SAMPSON PETER [CA]; PAULS H) 24 June 2004 (2004-06-24) abstract; claims 1,7,8,21-49; figures 3a,3d,3f; examples 84,85,91-105,... ----- -/--	1-4, 18-47

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
 E earlier document but published on or after the international filing date
 L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 O document referring to an oral disclosure, use, exhibition or other means
 P document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
 & document member of the same patent family

Date of the actual completion of the international search

27 April 2007

Date of mailing of the international search report

12/09/2007

Name and mailing address of the ISA/

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/082586 A (AFFINIUM PHARM INC [CA]) 30 September 2004 (2004-09-30) claims 3,11,12,25-53; figures 2,3a,3d,3f; examples 7-10,17-21,... -----	1-4, 18-47
X	MARK A. SEEFELD ET AL: "Indole naphthyridinones as inhibitors of bacterial enoyl-ACP reductases FabI and FabK" JOURNAL OF MEDICINAL CHEMISTRY, vol. 46, no. 9, 2003, pages 1627-1635, XP002431493 abstract; figure 2; table 1; compounds 4,5,12,13 -----	1-4, 18-47

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-3 (part), 4, 18-47 (part)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3(part),4,18-47(part)

Compounds of formula I with the 1st mentioned heterocyclic group R characterised by the presence of the substituent R1

2. claims: 1-3(part),5,13,15,18-47(part)

Compounds of formula I with the 2nd, 10th and 12th mentioned heterocyclic groups R characterised by the substituent R' being (R)-Me

3. claims: 1-3(part),6,18-47(part)

Compounds of formula I with the 3rd mentioned heterocyclic group R characterised by the 1,4-oxazepine ring

4. claims: 1-3(part),7,8,18-47(part)

Compounds of formula I with the 4th and 5th mentioned heterocyclic groups R characterised by the presence of the substituent R4

5. claims: 1-3(part),9,18-47(part)

Compounds of formula I with the 6th mentioned heterocyclic group R characterised by the benzo ring

6. claims: 1-3(part),10,18-47(part)

Compounds of formula I with the 7th mentioned heterocyclic group R characterised by the spiro substituent R5R5

7. claims: 1-3(part),11,18-47(part)

Compounds of formula I with the 8th mentioned heterocyclic group R characterised by the presence of the substituent R7

8. claims: 1-3(part),12,18-47(part)

Compounds of formula I with the 9th mentioned heterocyclic group R characterised by the 1,4-oxazine ring

9. claims: 1-3(part),14,18-47(part)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Compounds of formula I with the 11th mentioned heterocyclic group R characterised by the 1,4-diazepine ring being b-condensed

10. claims: 1-3(part),16,18-47(part)

Compounds of formula I with the 13th mentioned heterocyclic group R characterised by presence of the 4-OH substituent

11. claims: 1-3(part),17,18-47(part)

Compounds of formula I with the 14th mentioned heterocyclic group R characterised by the azepine ring

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/045903

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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